23. (Twice Amended) The process of claim 21, wherein the MP52 protein is concentrated by in situ precipitation from the solvent in the calcium phosphate matrix by admixing a precipitating solvent.

25. (Twice Amended) A method of treating a disease which affects cartilage, bone, or cartilage and bone and/or damage to cartilage, bone, or cartilage and bone in a patient in need thereof, the method comprising implanting an implant material according to claim 28, into the patient.

28. (Twice Amended) An implant material suitable for cartilage, bone, or cartilage and bone growth comprising a matrix material which is composed of a crystallographically phase-pure calcium phosphate and applied in and/or on said matrix a cartilage inducing, bone inducing, or cartilage and bone inducing MP52 protein, wherein the MP52 protein is selected from the group consisting of

(a) a protein comprising amino acid 1 to 501, 28 to 501, 361-400 to 501, 381 to 501, 382 to 501, 400 to 500 of SEQ ID NO. 1,

(b) a protein according to (a) which is a homodimer, and

(c) a protein according to (b) in combination with a dimer of another protein of the TGF-β superfamily which shows cartilage or bone-inducing potential.

Please add the following new claims to the application:

–30. A method of inducing at least one of bone or cartilage growth in a patient in need thereof, the method comprising implanting an implant material according to claim 28 into the patient.--

–31. The method according to claim 30, wherein the bone defect is periodontosis.--

–32. A method for the treatment of a bone defect or bone fracture, for application in the jaw region or dental region or for immobilizing movable bone parts in a patient, comprising implanting an implant material according to claim 28 into the patient.--

REMARKS

In the Office Action dated October 23, 2002 claims 17-28 in the above-identified U.S. patent application were rejected. Reconsideration of the rejections is respectfully requested in view of the above amendments and the following remarks.

Claims 17-28 were rejected under 35 USC §112, first paragraph, as lacking enablement. Enclosed is an unsigned declaration which shows the cartilage and bone inducing activity of MP52. The finalized declaration will be filed shortly. In addition, applicants respectfully point out that TGF- family members are known to be expressed in the form of a precursor protein with a signal (pre)sequence, a propeptide part and the actual mature protein part. The mature protein contains a conserved 7 cysteine region, which is essential for the correct folding of the active proteins (6 cysteines form 3 intramolecular cysteine bridges and 1 cysteine forms an intermolecular cysteine bridge to the next monomer in order to form a dimer). One skilled in the art regards this region as the most important domain for the structure and functionality of TGF-β-superfamily members, sometimes said region is even described as a TGF-β-domain.